H4110-1

PENNSYLVANIA BUSINESS SURVEY

College of Business Administration The Pennsylvania State University **June 1986**

DESPITE A SLUGGISH APRIL, ECONOMY ON GROWTH TREND

Although the Commonwealth's economy failed to generate any momentum during April, there are **some indications that growth lies ahead.** The index of coincident indicators, which is positively correlated with current economic trends, fell 0.1 percent during the month following a 0.5 percent gain in March. On the other hand, the index of leading indicators, which signals future economic trends, turned in its second consecutive 0.7 percent advance.

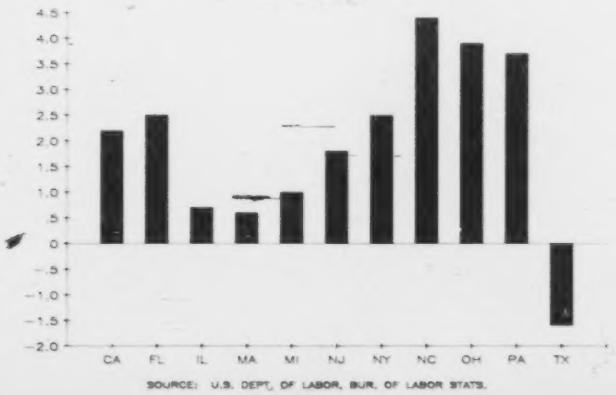
All three components of the coincident indicators registered declines: total resident employment, manufacturing job levels, and real earnings in the manufacturing sector. The very slight decline in employment, to a seasonally adjusted 5.3 million, comes on the heels of four straight monthly gains. Still, it is the second highest level on record and is up more than 210,000 from a year ago. At the same time, **the unemployment rate dipped a seasonally adjusted 0.5 percentage point to 7.1 percent. However, this decline is somewhat misleading since it is the result of a net outflow of individuals from the labor force** rather than an increase in the number of unemployed finding jobs. The labor force shrunk by a seasonally adjusted 35,000 individuals, while the number of residents counted as unemployed fell by 33,000.

Despite April's weakness, **there is no denying that Pennsylvania turned in a fairly solid performance on the employment/unemployment front during this year's first four months.** Compared to the same period in 1985, employment in the Commonwealth is up 3.7 percent relative to the nation's 2 percent growth rate. The number of residents in the State counted as unemployed dropped 7.1 percent over the period compared to the nation's 1.5 percent decline. Additionally, Pennsylvania's performance relative to the ten other large states covered by the *Current Population Survey* is also quite strong (see charts). Employment growth in Pennsylvania over the period is the third highest among these states. The decline in the jobless rate is the second highest. However, despite the Commonwealth's favorable performance as of late, the State's jobless rate has remained above the nation's (7.3 percent during the first four month's of this year after seasonal adjustment vs. 7.1 percent in the nation) and is the fifth highest among the 11 largest states.

A good deal of the economy's inability to put a significant dent in the unemployment rate may be traced to problems in the manufacturing sector. Job levels in these establishments fell again in April to a seasonally adjusted 1.05 million, another all-time low. The fall, which totalled 7,700, is due to declines in both the durable and nondurable goods industries. Additionally, total hours worked and total payrolls in manufacturing also fell in April. On the positive side, electricity sales to industry, a good barometer of industrial production, and steel output rose. All told, however, **the negative signals coming from the manufacturing sector outweigh the positive ones with no rebound yet in sight.**

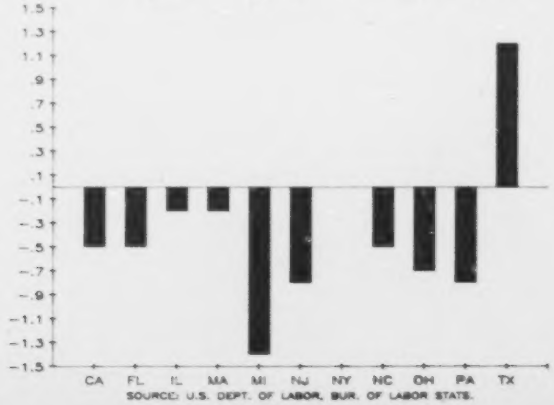
What job growth there has been lately has occurred in Pennsylvania's nonmanufacturing industries. Job levels in these establishments have advanced in each of the last 15 months to stand at a record-high 3.74 million after seasonal adjustment. Again, services industries contributed to non-

EMPLOYMENT GROWTH RATES FOR THE 11 LARGEST STATES, 1985 YTD TO 1986 YTD
(percent)

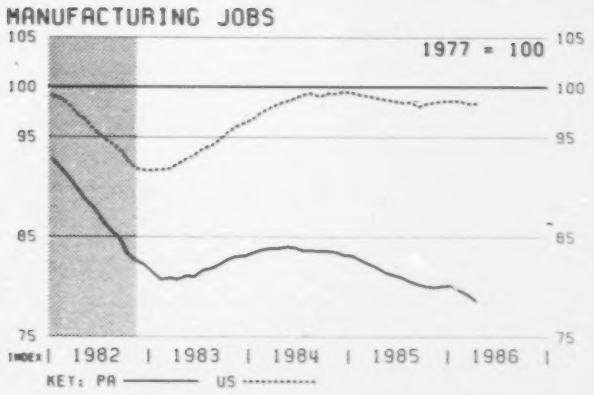


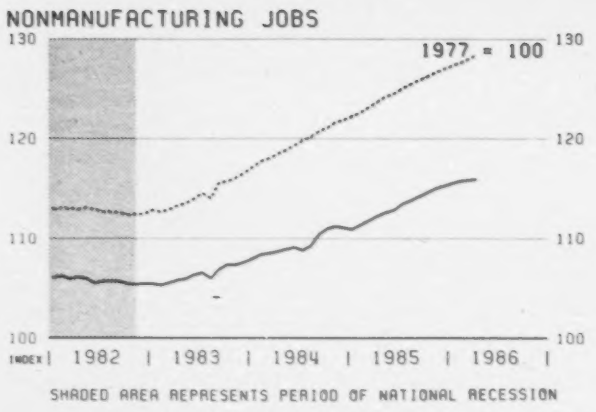
SOURCE: U.S. DEPT. OF LABOR, BUR. OF LABOR STATS.

UNEMPLOYMENT RATE CHANGES FOR THE 11 LARGEST STATES, 1985 YTD TO 1986 YTD
(percentage point difference)



SOURCE: U.S. DEPT. OF LABOR, BUR. OF LABOR STATS.





manufacturing's strength. The accompanying chart provides some insight into the structure of Pennsylvania's services industries. Health-related industries accounted for one-third of all services jobs last year, while the "other & miscellaneous" category accounted for more than one-fifth. The latter group includes such industries as personal services, repair shops, and engineering services, to name a few. Industries providing services to businesses, such as printing and advertising, accounted for 16 percent of all jobs in services.

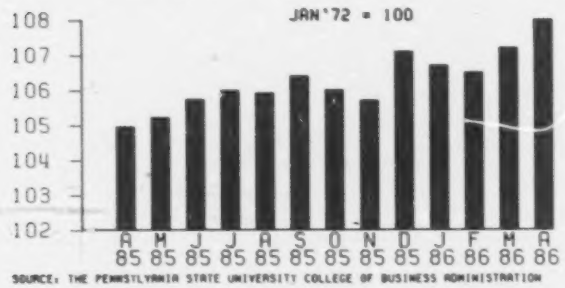
For the second month in a row, nonmanufacturing's gains have not been strong enough to offset manufacturing's losses. As a result, job levels in all nonagricultural establishments in the Commonwealth dipped again in April after seasonal adjustment to 4.79 million. Hence, while re-

Economic Activity in Pennsylvania	UNADJUSTED DATA			SEASONALLY ADJUSTED DATA			SEASONALLY ADJUSTED INDEXES (1977 = 100)		
	1986		1985	1986		1985	1986		1985
	Mar	*Apr*	*Apr*	*Mar*	*Apr*	*Apr*	*Mar*	*Apr*	*Apr*
Pennsylvania Industries									
All nonagricultural industries									
No. of wage and salary jobs (thous.)[1]	4,740	4,794	4,717	4,795	4,789	4,717	105.0	104.9	103.3
Nonmanufacturing									
No. of wage and salary jobs (thous.)	3,682	3,733	3,616	3,733	3,735	3,618	115.8	115.9	112.2
Manufacturing									
No. of wage and salary jobs (thous.)	1,056	1,053	1,098	1,062	1,054	1,099	79.1	78.6	81.9
Ave. wkly. hrs. worked by prod. workers	40.2	40.0	39.4	40.2	40.2	39.6	101.6	101.6	100.2
Total wkly. person-hours worked (mils.)	28.7	28.5	29.4	28.9	28.7	29.6	75.2	74.7	77.1
Total wkly. payroll (mil. dols.)	278.4*	277.0	281.3	280.4*	278.6	282.9	124.8*	124.0	125.9
Steel production (thous. tons)	1,074	1,067	1,199	n.a.	n.a.	n.a.	40.1	41.4	46.8
Industrial electric power sales (mil. kwh)	3,475	3,433	3,565	3,363	3,416	3,528	91.1	92.5	95.5
Mining									
Anthracite coal (thous. net tons)	305	300	249	310	375	310	63.4	76.7	63.4
Bituminous coal (thous. net tons)	5,350	n.a.	5,246†	4,854	n.a.	4,808†	68.8	n.a.	68.2†
Construction contracts awarded (mil. dols.)									
Total	742.2	884.8	634.8*	768.4	749.2	551.5*	238.8	232.9	171.4*
Residential building	292.9	434.7	300.0*	319.5	382.8	259.1*	227.0	272.0	184.1*
Nonresidential building	219.8	242.4	139.4*	256.6	213.9	130.2*	236.5	197.2	120.1*
Nonbuilding (utilities and public works)	229.6	207.8	195.3*	192.3	152.5	162.2*	265.3	210.4	223.7*
Employment of Pennsylvania Residents									
Employed, no. of persons (thous.)	5,166	5,189	4,978	5,302	5,300	5,087	110.3	110.3	105.9
Unemployed									
No. of persons (thous.)	445	392	445	434	401	454	108.2	99.9	113.2
Rate (percentage of labor force)	7.9	7.0	8.2						
Rate, seasonally adjusted				7.6	7.1	8.2			
Civilian labor force, no. of persons (thous.)	5,611	5,581	5,423	5,736	5,701	5,541	110.2	109.5	106.4
Initial claims for unemployment benefits	98,020	107,352	130,564	118,189	107,992	128,696	82.5	75.4	89.9

Consumer Prices, all items	Urban Indexes (1967 = 100) 1986 *Mar*	1986 *Apr*	1985 *Apr*	Percentage Change *Month Ago*	*Year Ago*
U.S. city average	326.0	325.3	320.1	−0.2	+1.6
Philadelphia	319.1	317.8	312.4	−0.4	+1.7
Pittsburgh	n.a.	328.1	324.3	n.a.	+1.2
Northeast PA	309.3	n.a.	304.9†	n.a.	+1.4

NOTES: Data on employment, payrolls and hours have been revised to first quarter 1985 benchmarks.
[1] Total includes workers on strike. * = figure revised † = figure for March 1984 n.a. = data not available
SOURCES AND DEFINITIONS OF DATA ARE AVAILABLE ON REQUEST.

PENNSYLVANIA COMPOSITE INDEX OF LEADING INDICATORS



SOURCE: THE PENNSYLVANIA STATE UNIVERSITY COLLEGE OF BUSINESS ADMINISTRATION

cent trends in total employment and unemployment have, for the most part, been fairly positive, patterns in Pennsylvania's nonagricultural establishments have not been so encouraging. This is another indication that overall economic growth is being held back by manufacturing.

Two of the three components of the leading index, initial claims for unemployment insurance and residential construction contracts, improved. The third, average weekly hours worked in manufacturing, was unchanged. Initial claims for unemployment insurance is a good indicator of future trends in the number of unemployed. April's decline is the third consecutive drop and suggests that a reduction in the number of unemployed in the future is possible.

The value of residential construction contract awards rose a seasonally adjusted 19.8 percent during the month to $382.8 million, well above last year's $259.1 million, as declining mortgage rates had a positive impact. However, the increase was not strong enough to offset losses in the nonresidential building and nonbuilding categories as total construction contract awards fell 2.5 percent to a seasonally adjusted $749.2 million. Still, this represents quite an improvement over April 1985's $551.5 million in permits.

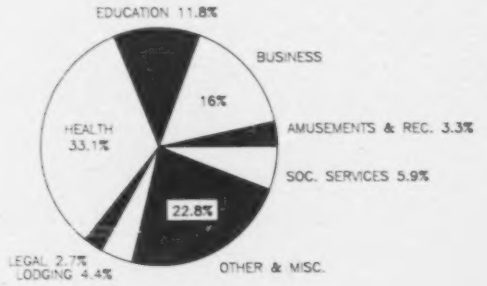
Recent behavior in the average factory workweek, which currently stands at a seasonally adjusted 40.2 hours, fails to signal any improvement in hiring activity. Usually, the workweek rises prior to an increase in hiring trends. However, **the workweek has increased only once so far this year and is only slightly higher than a year ago.**

Inflation, as represented by trends in the consumer price index, appears to be under control in the nation as a whole,

Pennsylvania Composite Indexes

	Index		Percentage Change from Preceding Month	
	Leading	*Coincident*	*Leading*	*Coincident*
September 1985	106.4	86.5	0.5	−0.1
October	106.0	86.3	−0.4	−0.2
November	105.7	85.2	−0.3	−1.3
December	107.1	86.6	1.3	1.6
January 1986	106.7	86.7	−0.4	0.1
February	106.5	86.4	−0.2	−0.3
March	107.2	86.8	0.7	0.5
April	108.0	86.7	0.7	−0.1

1985 SERVICE SECTOR JOBS DISTRIBUTION, PENNSYLVANIA



SOURCE: PA OFFICE OF EMP. SEC., DEPT. OF LABOR AND INDUSTRY

largely due to declines in oil prices. This is welcome news for consumers in that it stretches buying power. It also exerts downward pressure on interest rates as expectations of future inflation are reduced.

All told, April's trends suggest that **Pennsylvania's economy, because of an on-going pattern of one-sided growth favoring the nonmanufacturing sector, will have a hard time stringing together several months of healthy economic activity.** The construction and services industries will probably be strong enough to push overall economic growth along at an average pace, but without help from manufacturing, that is about all we can hope for.

— *William D. Anderson*

Personal Income Report

Personal income trends in Pennsylvania during 1985 were very similar to those in the other major economic indicators: some growth, albeit less than in the nation. At $153.8 billion, Pennsylvania personal income stood 5.1 percent higher than in 1984, while nationally, the increase was 6.3 percent. In fact, Pennsylvania fell short of national growth rates in each of the three components of personal income: net labor and proprietors income; dividends, interest and rent; and transfer payments.

Total nonfarm earnings growth in the Commonwealth, at 5.6 percent, trailed national growth by 1.6 percentage points. Much of the shortfall was due to sluggishness in manufacturing, particularly in durable goods. Relatively poor performances were also reported in the mining, transportation and public utilities, trade, finance, and government industry groupings. Pennsylvania did manage to outperform the nation in four industry groups: agricultural services, construction, nondurable goods manufacturing, and services.

Much is being made of the on-going shift towards a services-based economy, away from one than is manufacturing-based. This shift is evident in earnings distributions. Between 1975 and 1985, the share of nonfarm earnings accounted for by the services industries rose 7.1 percentage points to 23 percent (see chart) in Pennsylvania. At the same time, the shares of durable and nondurable goods manufacturing fell 5.3 and 0.4 percentage points, respectively.

Much is also being made of a pending considerable drop in standards of living as we continue this structural shift. However, an examination of the evidence does not point towards a significant fall. For instance, while services accounted for 23 percent of earnings in Pennsylvania in 1985, they accounted for 24.7 percent of nonagricultural employment. Finance-related industries had shares of 6 (earnings) and 5.5 (employment) percent. These figures suggest that earnings in these two industry groups are very close to "average." The trade industries, however, do appear to be relatively low paying. While they account for 22.6 percent

1985 Personal Income by Major Source, Pennsylvania and the United States (Millions of Dollars)

	Pennsylvania		U.S.
	1985	Pct. Chg. From 1984	Pct. Chg. From 1984
Labor and proprietors income by place of work	106,856	5.5	7.0
By type			
Wage and salary disbursements	88,725	5.1	6.9
Other labor income	10,951	6.7	8.4
Proprietors income	7,180	8.2	7.2
By industry			
Farm	777	-4.5	-2.0
Nonfarm	106,080	5.6	7.2
Private	91,747	5.8	7.2
Ag. serv., for., fish., and other	306	15.5	15.4
Mining	1,337	-3.0	2.7
Construction	5,438	9.3	9.1
Manufacturing	29,881	1.7	4.4
Nondurable goods	11,104	3.9	3.6
Durable goods	18,777	0.4	4.8
Transportation and public utilities	7,818	3.4	5.5
Wholesale trade	6,626	6.5	8.3
Retail trade	9,681	5.4	6.5
Finance, insurance, and real estate	6,360	8.2	8.5
Services	24,302	11.0	10.5
Government	14,333	4.4	7.0
Federal, civilian	3,660	3.9	6.1
Federal, military	550	-2.1	5.6
State and local	10,123	5.0	7.6
Total personal income	153,791	5.1	6.3
Nonfarm personal income	153,014	5.2	6.4
Net labor proprietors income[1]	99,059	5.2	6.6
Dividends, interest and rent	28,100	4.2	4.8
Transfer payments	26,631	6.0	6.8

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, April 1986.

[1]Total earnings by place of work less personal contributions for social insurance and plus an adjustment for residence.

of all jobs, they account for just 15.4 percent of earnings. Manufacturing, on the other hand, accounts for 23 percent of all jobs and 28.3 percent of all earnings. Hence, jobs in the services-related industries are generally lower paying than in manufacturing, but except for trade, they do appear to offer, at least, close to "average" earnings. Therefore, the drop in standards of living as economic activity shifts towards these industries will probably not be major.

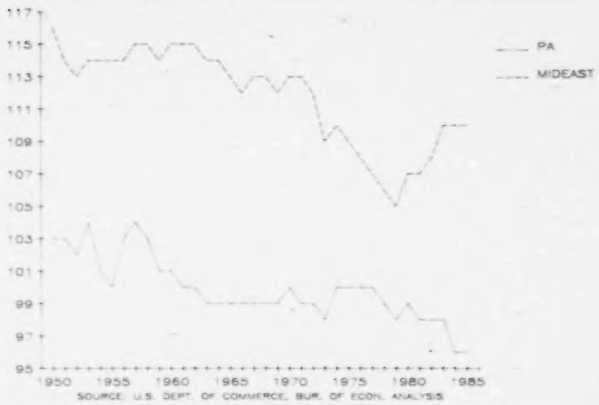
The Commonwealth also comes up short of national norms when personal income on a per capita basis (PCPI) is examined. At $12,959, PCPI in Pennsylvania in 1985 was only 96 percent of the nation's average. Furthermore, the State's relative standing appears to be worsening. Throughout much of the 1950s, PCPI in Pennsylvania was well above the national average. As late as 1977, it was equal to the nation's.

Additionally, the Commonwealth's standing relative to the rest of the Mideast region (Delaware, District of Columbia, Maryland, New Jersey, and New York) is worsening (see chart). While the gap narrowed throughout the 1970s, since then, it has widened. At $14,844, PCPI in the Mideast region was 110 percent of the national average in 1985.

Personal income data for the various metropolitan areas around the State is only available through 1984. During 1984, almost all regions in the eastern half of the State managed to surpass the Commonwealth's 7.8 percent growth rate, while nearly all regions in the western portion of Pennsylvania failed to perform up to these standards. In fact, of the seven fastest growing regions (in terms of personal income), six were in the eastern half of the State. The situation is quite similar when per capita trends are examined. Of the seven regions with the highest levels of PCPI, six were from the eastern half of the Commonwealth.

— William D. Anderson

PER CAPITA PERSONAL INCOME AS A PERCENTAGE OF THE NATIONAL AVERAGE, PA AND THE MIDEAST



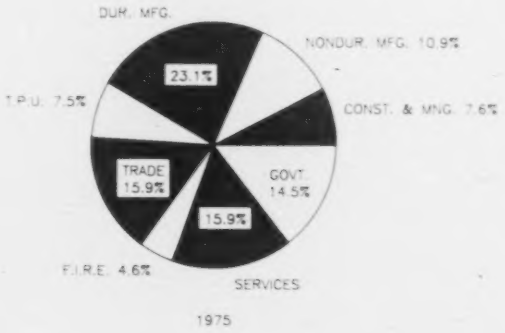
SOURCE: U.S. DEPT. OF COMMERCE, BUR. OF ECON. ANALYSIS

1984 Total and Per Capita Personal Income, Pennsylvania Metropolitan Areas

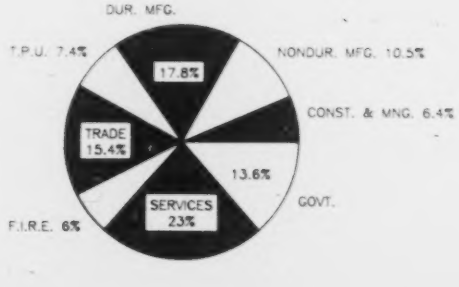
	Total Personal Income (Millions of Dollars)		Per Capita Income	
	1984	Pct. Chg. from 1983	1984	Pct. of Natl. Ave. 1984
Allentown-Bethlehem	8,494	9.0	13,134	103
Altoona	1,277	6.5	9,501	74
Beaver County	2,143	4.2	10,758	84
Erie	3,142	8.1	11,136	87
Harrisburg-Lebanon-Carlisle	7,267	8.9	12,743	100
Johnstown	2,550	5.9	9,847	77
Lancaster	4,722	10.9	12,382	97
Philadelphia	65,547	8.7	13,746	108
Pittsburgh	27,551	5.7	12,680	99
Reading	4,253	9.7	13,407	105
Scranton-Wilkes-Barre	7,858	6.7	10,812	85
Sharon	1,295	6.9	10,187	80
State College	1,120	9.5	9,786	77
Williamsport	1,233	7.8	10,527	82
York	4,616	9.7	11,793	92

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System, April 1986.

PENNSYLVANIA NONFARM EARNINGS DISTRIBUTIONS, 1975 AND 1985
(by place of work, percent)



1975



1985

Historical Educational Attainment Trends In Pennsylvania

All available data suggest that educational attainment levels in the Commonwealth fall short of national norms. Census data for the 1940-1980 period, presented in Table 1, illustrate this point. Over the period, a larger portion of the Pennsylvania population at least 25 years old ended their formal education without advancing beyond the eighth grade compared to the nation as a whole. However, the difference between Pennsylvania and the U.S. narrowed considerably over time. As of the 1940 Census, 65 percent of the Pennsylvania population had not advanced beyond the eighth grade compared to 60.4 percent in the nation, a difference of 4.6 percentage points. By 1980, the comparable figures were 18.4 percent in the Commonwealth and 18.3 percent in the nation, a difference of just 0.1 percentage point.

Data from the annual educational attainment surveys conducted since 1980 as part of the *Current Population Survey* indicate further improvements in both Pennsylvania and the U.S. However, the gap has widened between Pennsylvania and the nation since 1980. As of 1984, 15 percent of Pennsylvanians had not completed any formal education beyond the eighth grade versus 14.3 percent nationally, a difference of 0.7 percentage point. In that the *CPS* figures are subject to a larger sampling error, they are less reliable than the Census data.

As further evidence of Pennsylvania's relatively low educational attainment levels, the Census results show that, except for 1940, a larger portion of the State's population had entered, but failed to complete, high school and a larger portion had ended their formal education after obtaining a high school diploma compared to the U.S. The Commonwealth's standing relative to the nation has deteriorated over time. By 1980, 16.9 percent of Pennsylvanians at least 25 years old had completed just 1-3 years of high school compared to 15.3 percent nationally, a difference of 1.6 percentage points. The less reliable *CPS* figures from later years show no improvement in the Commonwealth's relative standing.

Similarly, 34.6 percent of the nation's population in 1980 ended their formal education after graduating from high school compared to 40.4 percent in Pennsylvania for a difference of 5.8 percentage points. Again, no improvement is apparent in the *CPS* data.

Given these trends, it is certainly not surprising that the number of Pennsylvanians with 1-3 years of college or with four or more years has remained considerably below national standards over the period. Additionally, the Commonwealth's relative standing has worsened.

Four percent of the Pennsylvania population had 1-3 years of college according to the 1940 Census, 1.5 percentage points below the nation's 5.5 percent. As of 1980, this gap had widened to 5 percentage points (10.7 percent in Pennsylvania and 15.7 percent in the U.S.). The situation is quite similar when looking at the percentage of the population with

Table 1: Years of School Completed
(percentage of the population over 25 years of age)

	United States				
		High School		College	
	Elementary	1-3	4	1-3	4+
1940	60.4	15.2	14.3	5.5	4.6
1950	48.3	17.4	20.8	7.4	6.2
1960	39.7	19.2	24.6	8.8	7.7
1970	28.3	19.4	31.1	10.6	10.7
1980	18.3	15.3	34.6	15.7	16.2
1981	16.7	13.6	37.6	15.1	17.1
1982	15.8	13.3	37.9	15.3	17.7
1983	15.1	12.8	37.7	15.6	18.8
1984	14.3	12.4	38.4	15.8	19.1
	Pennsylvania				
		High School		College	
	Elementary	1-3	4	1-3	4+
1940	65.0	13.7	13.0	4.0	4.2
1950	50.5	17.5	21.5	5.0	5.5
1960	42.0	19.8	25.5	6.2	6.4
1970	29.2	20.6	34.5	7.0	8.7
1980	18.4	16.9	40.4	10.7	13.6
1981	n.a.	n.a.	n.a.	n.a.	14.6
1982	16.6	15.6	44.8	9.0	14.0
1983	16.4	14.8	44.1	9.2	15.5
1984	15.0	14.7	45.5	9.8	15.1

Source: U.S. Dept. of Commerce, Bureau of the Census
(1982-1984 data is unpublished)

at least four years of college. Pennsylvania fell short of national standards by just 0.4 percentage point in 1940, but by 2.6 points in 1980.

The *CPS* figures show further increases in both statistics at the state and national levels. However, they also show that Pennsylvania's standing relative to the U.S. has probably continued to decline.

Figures 1 and 2 offer further evidence that Pennsylvania lags the nation in terms of educational attainment. Figure 1 shows the percentage of the population in Pennsylvania and the U.S. with high school diplomas. Census data over the 1940-1980 period show that this measure of educational attainment rose consistently in both the Commonwealth and the nation.

However, Pennsylvania trailed the nation in all five Census years. The shortfall ranged from 1.8 percentage points in 1980 to 3.3 points in 1940. As of 1980, 64.7 percent of the Pennsylvania population were high school graduates compared to 66.5 percent in the nation.

CPS data over the 1981-1984 period show that the upward trend in this measure of educational attainment levels continued. At the same time, the data fail to signal any improvement in the Commonwealth's relative standing.

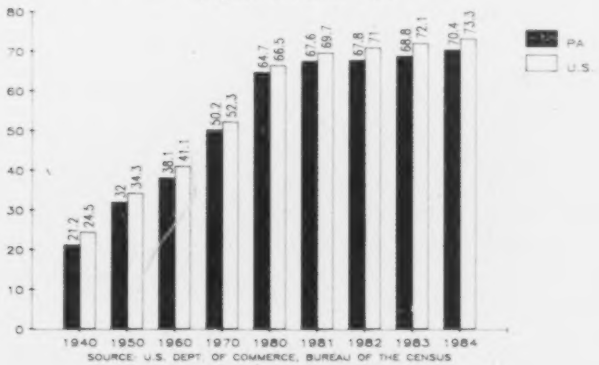
Figure 2 shows the median years of school completed in Pennsylvania and the U.S. Again, it is apparent that this measure of educational attainment has been on the rise in both Pennsylvania and the U.S. It is also apparent that Pennsylvania has consistently lagged the U.S. However, data from the 1970 and 1980 Censuses and from the *CPS* surveys suggest that the difference between the Commonwealth and the nation is quite small.

When it comes to competing for jobs and new businesses, Pennsylvania often finds itself going up against other large (in terms of population), heavily industrialized states. Figures 3, 4, and 5 show how the Commonwealth compares with the 14 other large states covered by the *CPS* educational attainment data in 1981 (the last year for which data are published).

Figure 3 shows the percentage of the population at least 25 years old with college degrees in each of the 15 largest states in 1981. Pennsylvania ranks 13th with 14.6 percent of the population holding degrees. The only states with lower measures are Ohio and Indiana. The two other states in the Mid-Atlantic region, New Jersey and New York, rank fifth and sixth, respectively.

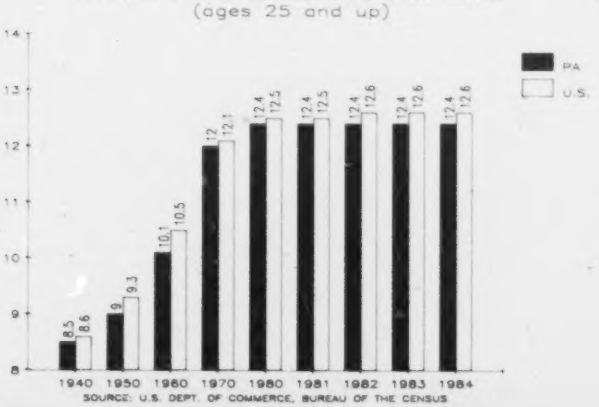
The percentage of the population with at least a high school diploma in the 15 largest states in 1981 is shown in Figure 4. The Commonwealth ranked 12th with 67.6 percent of its population holding high school diplomas. Only Virginia,

Figure 1
HIGH SCHOOL GRADUATES
AS A PERCENTAGE OF THE POPULATION
(ages 25 and up)



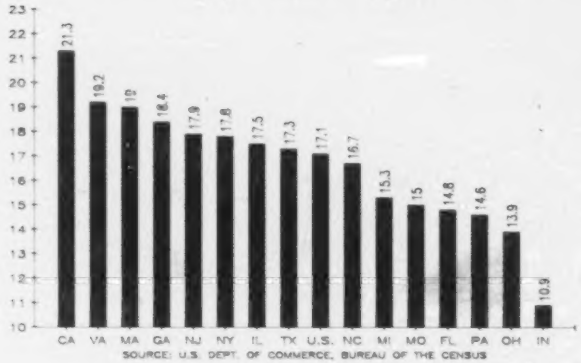
SOURCE: U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS

Figure 2
MEDIAN YEARS OF SCHOOL COMPLETED
(ages 25 and up)



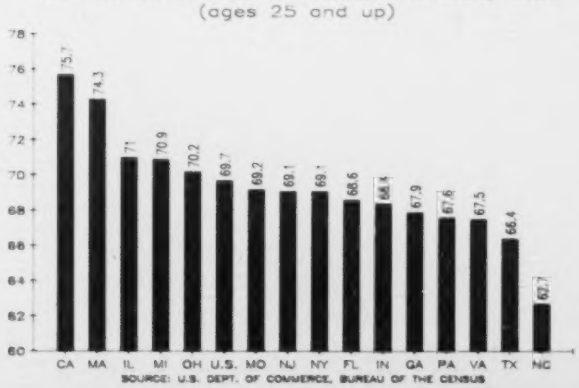
SOURCE: U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS

Figure 3
COLLEGE GRADUATES AS A PERCENTAGE OF THE
POPULATION OF THE 15 LARGEST STATES, 1981
(ages 25 and up)



SOURCE: U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS

Figure 4
HIGH SCHOOL GRADUATES AS A PERCENTAGE OF THE
POPULATION OF THE 15 LARGEST STATES, 1981
(ages 25 and up)



SOURCE: U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS

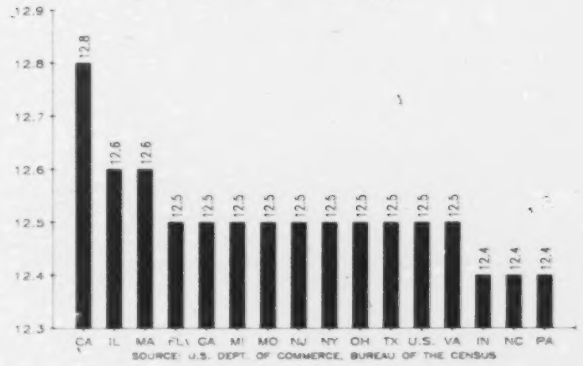
Texas, and North Carolina had smaller representations of high school graduates in their populations. New Jersey and New York ranked seventh and eighth, respectively.

Figure 5 shows the median years of school completed in each of the 15 largest states in 1981. With a median of 12.4 years, Pennsylvania was tied for last, along with Indiana and North Carolina. With a median of 12.5 years, New Jersey and New York ended up in the middle of the pack.

— *William D. Anderson*

(This is a brief summary of a paper dealing with educational attainment levels in Pennsylvania over the 1940-1984 period. The availability of the paper will be anounced in an upcoming issue of the Survey.)

Figure 5
MEDIAN YEARS OF SCHOOL COMPLETED
FOR THE 15 LARGEST STATES, 1981
(ages 25 and up)



SOURCE: U.S. DEPT. OF COMMERCE, BUREAU OF THE CENSUS

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